

Claims

- 1 1. A method for supporting a handoff of a mobile node from a first agent of a first
2 network to a second agent of a second network ,the method comprising the steps of:
3 upon initiation of the handoff, sending a first message to the first agent requesting
4 the first agent to buffer any packets being sent to the mobile node;
5 completing the handoff to the second agent; and
6 sending a second message to the first agent requesting the first agent to forward the
7 buffered packets to the second agent.

- 1 2. The method of claim 1 wherein the first message is part of a registration request
2 protocol to the second agent.

- 1 3. The method of claim 2 wherein the second message is also part of the registration
2 request protocol, occurring after the second agent has been authorized.

- 1 4. The method of claim 1 wherein the first and second networks are mobile internet
2 protocol networks.

- 1 5. The method of claim 4 wherein the second agent is a foreign agent to the mobile
2 node.

- 1 6. The method of claim 1 wherein the mobile node sends the first message to the first
2 agent.

- 1 7. The method of claim 1 wherein the second agent sends the first message to the first
2 agent.

- 1 8. A software program for facilitating a handoff of a mobile node from a first agent to a
2 second agent, the software program comprising instructions for:
3 determining that the handoff is to be initiated;

4 sending a first message to the first agent requesting the first agent to buffer any
5 packets being sent to the mobile node;
6 completing the handoff to the second agent; and
7 signaling the first agent to forward the buffered packets to the second agent.

1 9. The software program of claim 8 wherein the first message is part of a registration
2 request protocol to the second agent.

1 10. The software program of claim 9 wherein the second message is also part of the
2 registration request protocol, occurring after the second agent has been authorized.

1 11. The software program of claim 8 wherein the first and second networks are mobile
2 internet protocol (IP) networks.

1 12. The software program of claim 11 wherein the second agent is a foreign agent to the
2 mobile node.

1 13. The software program of claim 8 wherein the second agent sends the first message to
2 the first agent.

1 14. The software program of claim 8 further comprising
2 sending, by the mobile node, a buffer control request.

1 15. The software program of claim 15 further comprising
2 sending an indicator to the second agent that the mobile node has requested
3 buffering.

1 16. The software program of claim 8 wherein the first message includes an indicator of a
2 buffer size.

1 17. The software program of claim 8 further comprising:

2 discarding, by the first agent, predetermined packets when a maximum number of
3 packets have been received.

1 18. The software program of claim 8 further comprising:
2 signaling the first agent to delete the buffered packets.

1 19. The software program of claim 18 further comprising:
2 signaling forwarding any packets received after the buffered packets are deleted.

1 20. The software program of claim 8 wherein the first message includes an indicator of a
2 maximum length of time that buffering is needed.

1 21. The software program of claim 8 wherein the first message includes an indicator of
2 authenticity for the buffering.

1 22. The software program of claim 11 wherein the first message includes an IP filter to
2 identify certain packets that do not need to be buffered.

1 23. A software program for a new agent of a new network to initiate communication with
2 a mobile node ,the software program comprising instructions for:
3 determining that the mobile node is in handoff;
4 sending a first message to the old agent requesting the old agent to buffer any
5 packets being sent to the mobile node;
6 completing the handoff of the mobile node; and
7 signaling the old agent to forward the buffered packets to the new agent.

1 24. The software program of claim 23 wherein the old and new networks are mobile
2 internet protocol networks.

1 25. The software program of claim 23 wherein the new agent is a foreign agent to the
2 mobile node.

1 26. The software program of claim 23 wherein the first message is sent by the mobile
2 node.

1 27. The software program of claim 23 wherein the new agent sends the first message to
2 the old agent.

1 28. A system for supporting a handoff of a mobile node from a first agent of a first
2 network to a second agent of a second network ,the system comprising:

3 means for sending, upon initiation of the handoff, a first message to the first agent
4 requesting the first agent to buffer any packets being sent to the mobile node;

5 means for completing the handoff to the second agent; and

6 means for sending a second message to the first agent requesting the first agent to
7 forward the buffered packets to the second agent.